

1. IDENTIFICATION

Product Name	Manganese Mn Edta
Other Names	Ethylenediaminetetraacetic Acid Manganese Disodium Complex; Glycine,N,N'-1,2-Ethanediybis[N-(Carboxymethyl)-,Disodium; Manganate(2-), [[N,N'-1,2-ethanediybis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, disodium, (OC-6-21)-
Uses	Fertiliser
Chemical Family	No Data Available
Chemical Formula	C10H12MnN2O8.2Na
Chemical Name	Ethylenediaminetetraacetic acid, manganese disodium salt
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	No. 8, Block G, Ground Floor, Taipan 2 Jalan PJU 1A/3 Ara Damansara 47301, Petaling Jaya, Selangor, Malaysia	+60-3-7843-6833

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not scheduled

Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word

None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS*Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Manganese Disodium EDTA	No Data Available	15375-84-5	89.0 - 93.0 %
Water	No Data Available	7732-18-5	0 - 10.0 %
Disodium EDTA	No Data Available	139-33-3	~ 1.0 %
Nitrilotriacetic Acid (NTA)	No Data Available	139-13-9	~ 1.2 %

4. FIRST AID MEASURES*Description of necessary measures according to routes of exposure***Swallowed**

Signs and Symptoms: Excessive ingestion must occur before any health hazard results. Effects of overexposure may include nausea, vomiting, diarrhea, weakness or convulsions. Treatment: For large amounts, seek medical attention immediately

Eye

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention if irritation develops.

Skin

Start flushing while removing contaminated clothing. Use water and soap to thoroughly wash affected areas. Do not attempt to neutralize with chemical agents. Obtain medical advice if irritation, redness, or burning sensation develops and persists.

Inhaled

Move victims to fresh air. Oxygen may be give under doctor's advice. If breathing has stopped, give artificial respiration. Get medical help.

Advice to Doctor

Treat symptomatically based on judgement of doctor and individual reactions of patient.

Medical Conditions Aggravated by Exposure

No information available on medical conditions which are aggravated from exposure to this product.

5. FIRE FIGHTING MEASURES**General Measures**

Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.

Flammability Conditions

Product is a non-flammable solid.

Extinguishing Media

Use foam or carbon dioxide extinguishing agents. Dry chemical, foam or water fog.

Fire and Explosion Hazard

Product is not flammable or combustible. When involved in a fire, it does not contribute any unusual hazards.

Hazardous Products of Combustion

Under fire conditions may support combustion & decomposes to give off CO, nitrogen oxides and water vapour.

Special Fire Fighting Instructions

Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Personal Protective Equipment

Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

Flash Point

No Data Available

No Data Available

Lower Explosion Limit	
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	>260 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste.
Containment	Stop leak if safe to do so. Isolate the danger area.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes.
Storage	Keep containers close and store in a dry place, as product is hygroscopic. Isolate this material from strong oxidisers. Avoid contact with aluminium, copper, copper alloys and nickel. Avoid direct and prolonged contact with skin. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m ³ (for inspirable dust) and 3mg/m ³ (for respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	RESPIRATOR: Wear an approved respirator where dusts are generated and engineering controls are inadequate (AS1715/1716). EYES: Wear appropriate protective eyeglasses or chemical safety goggles (AS1336/1337). HANDS: Wear protective gloves (AS2161). CLOTHING: Clean, body-covering clothing and safety footwear (AS3765/2210).
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Odour	Odourless
Colour	Light beige
pH	Approx. 6.5 (1% solution)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	Decomposes without melting
Freezing Point	No Data Available
Solubility	784 - 816 g/L 20°C
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	>260 °C
Evaporation Rate	No Data Available
Bulk Density	675-775 kg/m ³ (untapped)
Corrosion Rate	No Data Available
Decomposition Temperature	>260 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

General Information	Hygroscopic material.
Chemical Stability	Product is stable under normal conditions of use, storage and temperature.

Conditions to Avoid	Avoid prolonged storage at higher temperature and humid conditions as product is hygroscopic. Product layer on hot surface might cause glowing or auto ignition.
Materials to Avoid	It is incompatible with strong oxidisers. Avoid contact with aluminium, Copper, Copper alloys and nickel.
Hazardous Decomposition Products	Under fire conditions may support combustion & decomposes to give off CO, nitrogen oxides and water vapour.
Hazardous Polymerisation	Hazardous polymerization is not expected to occur under normal temperatures & pressures.

11. TOXICOLOGICAL INFORMATION

General Information	Excessive exposure to Manganese (Mn) by ingestion or inhalation can lead Manganese (Mn) accumulation in specific potation of the brain and a central nervous syndrome called "manganism", which has clinical signs similar to those of Parkinson's disease. Contains an impurity that may cause kidney damage & cancer in laboratory animals.
Inhalation	Inhalation of dust may cause discomfort and/or respiratory tract irritation.
Ingestion	May be harmful if swallowed. Product has low order of acute toxicity and considered to be practically harmless by ingestion.
Eyelrritant	May cause eye irritation.
SkinIrritant	May cause irritation.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecological information available for this product.
Persistence/Degradability	Degradation Biotic: Not readily biodegradable.
Mobility	No information available on mobility for this product.
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	MANGANESE Mn EDTA
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available

UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name MANGANESE Mn EDTA
Class No Data Available
Subsidiary Risk(s) No Data Available
 No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name MANGANESE Mn EDTA
Class No Data Available
Subsidiary Risk(s) No Data Available
 No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name MANGANESE Mn EDTA
Class No Data Available
Subsidiary Risk(s) No Data Available
 No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name MANGANESE Mn EDTA
Class No Data Available
Subsidiary Risk(s) No Data Available
UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available
EMS No Data Available
Marine Pollutant No

Air Transport

IATA

Proper Shipping Name	MANGANESE Mn EDTA
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	Not subject to IATA

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Not Assessed
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined

Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	CHELMA4000, CHELMA4100, CHELMA4300, CHELMA4001
Revision	3
Revision Date	01 Oct 2015
Reason for Issue	SDS updated
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion ppm Parts per Million ppm/2h Parts per Million per 2 Hours ppm/6h Parts per Million per 6 Hours psi Pounds per Square Inch R Rankine RCP Reciprocal Calculation Procedure STEL Short Term Exposure Limit</p>

TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight